

Langston



April 4, 1963

INTERNATIONAL PAPER CO.
Livermore Falls
Maine

Gentlemen:

We are pleased to submit for your acceptance the following proposal covering

ITEM #1

One (1) 92" SPEEDMASTER Model 423 SLITTER & WINDER \$46,990.00

Maximum Rewind Speed	-	4500 FPM
Maximum Rewind Diameter	-	60"
Minimum Width Slit	-	7"

Machine to be RIGHT
LEFT Hand Drive

Special Features

Winding drums to be 23-1/2" diameter
Rider roll, 10-3/8" diameter, to be raised, lowered,
and preloaded hydraulically
Hydraulic rewind shaft lift
Hydraulic Roll Ejector
Automatic engagement of shear cut slitters on the
slitter station
Hydraulic pump unit
Automatic threading mechanism
Air clutch on rider roll belt drive
Idlers are 10-1/2" in diameter
Winding drum nip guard

Equipment - Included with Machine

Six (6) pairs combination friction and power driven
shear cut slitters
Sheet spreading arrangement utilizing a driven Mount Hope
rotating expander roll, 6-1/4" diameter with adjustable
end bracket
Two (2) idlers, one mounted on the slitter station and one
adjustable idler mounted on the rear of the side frames

April 4, 1963

Item #1.- Continued:Equipment - Extra

Additional shear cut slitters are \$260.00 per pair
Shaft Loader \$1,000.00

Rewind shafts - complete with anti-friction
bearing arrangement:

One (1) steel rewind shaft for 3" I. D. paper cores 545.00

One (1) Tidland leaf type pneumatic collapsible
rewind shaft for 3" I. D. paper cores 1,255.00

ITEM #2

One (1) S. M. Langston Torque Control Winder Drive 29,935.00
consisting of the following:

One (1) Reliance Variable Speed DC Drive

One (1) 100 HP gearmotor, direct connected to
the first winding drum

One (1) 30 HP, torque control, gearmotor direct
connected to the second winding drum

One (1) 5 HP, 1750 RPM DC motor to be belted
to the Unwind Stand idler roll

One (1) power and control unit housing the regu-
lators, drive adjustments, and the motor generator
set with magnetic across-the-line starter in an
enclosed cabinet, air-cooled by filtered air

Langston Mechanical Torque Control Drive Parts

Equipment - Extra

Built-In Panel Tester for Control Cabinet providing 600.00
method to test individual regulator components while
at rest or operating

April 4, 1963

ITEM #3

One (1) Control Console housing controls and indicators for the Winder, Winder Drive, Unwind Stand, and Roll Drop in a desk type stand	\$ 925.00
--	-----------

ITEM #4

One (1) 92" Model #345 Hydraulic Shaftless Unwind Stand to include the following:	17,150.00
---	-----------

Stand to accommodate mill rolls up to 60" in diameter, 10,500# maximum

Stand to include cones for 3" I.D. paper cores
Hydraulic pump unit, complete with motor and starter

Pneumatic water-cooled brakes with manual tension control

One (1) idler roll 10-1/2" diameter

Equipment - Extra

Two-Idler Arrangement, 10-1/2" diameter, required for constant tension and side register control	2,005.00
--	----------

Constant Tension Control Feature	1,900.00
----------------------------------	----------

Langston Side Register Control using a pneumatic scanner head	3,090.00
---	----------

Automatic Oscillation Control with variable frequency and amplitude:

If furnished with Side Register Control	600.00
---	--------

If furnished without Side Register Control	2,450.00
--	----------

* * *

April 4, 1963

ITEM #5Alternate "A"

One (1) Langston Hydraulic Roll Lowering Device to be mounted on the floor, in front of the Slitter and Winder for handling a 60" diameter, 10,500 lbs. roll	\$2,975.00
---	------------

Alternate "B"

One (1) Revolvator Roll Drop with extension arms to be suspended from the floor in front of the Slitter and Winder for handling a 60" diameter, 10,500 lbs. roll	3,960.00
---	----------

* * *

SPECIFICATIONS

Item #1 - Slitter and Winder: The basic machine will use heavy side frames in which are mounted anti-friction bearings for all rotating members. The winding drums, spreader arrangement, and idlers are at least machine width plus 4-1/2". It is recommended that these side frames be positioned on sole plates.

Winding Drums: These steel drums are furnished with alloy steel journals, rotating in oil-lubricated, self-aligning roller bearings which are specially engineered for minimum end play and long service life. Threading of the paper is between the drums.

The rear or first winding drum will be driven by the main DC drive motor. The front drum, designated the second winding drum, will be driven by a smaller horse power DC drive motor. A variation in the torque relationship of the motors, while running, is a function of the drive controls.

Rider or Pressure Roll: This roll is of steel tubing construction and rotates on large oil-lubricated, self-aligning roller bearings which are mounted on the inside cross shaft. This enables the bearings to be placed inside the rider roll, thus minimizing rider roll deflection.

Hydraulic Rider Roll Control: Hydraulic power is used to raise, lower, and preload the rider roll for roll starts. The effective roll weight can be varied from maximum to zero in the down direction. A feature of this control is the prescheduled gradual reduction in rider roll weight on the rewound roll as it builds up in diameter. This pressure variation may be scheduled automatically or manually. The system also provides for quickly raising or lowering the rider roll.

Hydraulic Rewind Shaft Lift: Hydraulic power is used to raise and lower the rewind shaft bracket assembly (one bracket on each side frame) which holds the rewind shaft. A convenient hand control allows for quick and convenient positioning of the rewind shaft assembly during roll change-over, or to manually adjust the pressure of the hydraulic lift during roll build-up.

Idlers: The idler rolls are of steel tubing construction and driven. The adjustable rear idler and cutter shaft are driven by an Extremultus belt from the rear winding drum. The remaining idler is mounted on the slitter cradle and is belt driven by a separate arrangement.

Item #1 - Continued:

Slitter Assembly: Langston design fixed angle shear cut slitters are provided with this machine. The design uses a friction blade against a power driven blade mounted on a chrome-plated, driven cutter shaft. These slitters are of the new Langston design with a guaranteed maximum run-out of no more than plus or minus 0.001".

The slitters are automatically actuated to the slit position from the open position by means of a push button control. The blades are held in equal and even tension against each other by air pressure. This air pressure can be varied to give the degree of knife pressure most suitable for the grade of paper being slit.

The maximum number of slitters to be handled is ten, unless otherwise specified.

The end slitters have separate air supply and may be used as fixed trim slitters.

Slitter Station: The entire station is composed of the cutter shaft and slitter assembly, the spreader arrangement, and a threading idler. The entire assembly pivots around the center of the cutter shaft with an angle of rotation of about 60 degrees. This rotation is hydraulically actuated and serves a twofold purpose. At shutdown it facilitates slitter set-up, and during Winder operation it varies the exit angle (and also the spreading action) from the spreader arrangement to the rewind drum.

The friction slitters are actuated by a pneumatic arrangement. Through push button control the slitters may be parted for thread-up or engaged for slitting.

Pump Unit: A hydraulic power source, including hydraulic pump, AC motor with across-the-line starter and oil reservoir (serving as a base) is supplied by the Samuel M. Langston Company.

Item #1 - Continued:

Hydraulic Roll Ejector: This device will eject rolls from the valley between the winding drums onto a Roll Drop or Lowering Table. A pusher bar, actuated by two hydraulic cylinders, ejects the rewound rolls from the Winder.

Winder Guard: This power-operated guard is mounted in front of the Winder front beam and moves in the vertical direction, activated by a lever-operated valve. Interlocking on the drive prevents the Winder from running (it does not prevent jog or thread operation) when the guard is in any position other than on top of the Winder front beam.

Equipment - Extra

Shaft Loader: This mechanism uses two pivoted extension arms to move the rewind shaft into position between the winding drums. These extension arms are power-operated through a lever-operated valve.

Item #2: The variable speed DC main drive motor will be used to drive the No. 1 winding drum and will operate over a range of all armature voltage control. This motor will get its power from the main generator, and a silicon VSH speed control regulator will provide independently controlled rates of acceleration and deceleration over the complete speed range.

The No. 2 winding drum will be driven by a separate variable speed DC motor and will obtain its power from a separate generator. The No. 2 winding drum generator will be controlled by means of a silicon VSH current regulator which in effect controls the torque output of the DC motor by regulating the loop currents. The torque available will be adjustable from the minimum value necessary to overcome friction and windage to the maximum value of the full horsepower rating of the motor. The percentage of the adjusted torque value will be modified based on the roll diameter and is obtained from a signal from the position regulator to the rewind shaft mechanism. This regulator will be a plunger type rheostat.

Under jogging operation both drum motors will be under speed control and receive jogging voltages from their individual generator, and the variations in speed between the second drum and the No. 1 drum will not be greater than 10%. This is type of operation occurring when the initial thread-up is made and before the core is started on the Winder. After thread-up is completed with the core on the Winder, continuous run-slow speed push button will furnish power to both winding drum motors with the No. 2 drum motor now operating under torque control. Under torque regulation for the No. 2 drum motor, special forcing circuits will be provided to modify the torque signals during acceleration and deceleration to insure that the preset torque is delivered to the roll during these speed changes.

Item #2 - Continued:

A manual-automatic selector switch will be provided in order to remove the No. 2 winding drum motor from the automatic (position controlled) torque regulation; when this is turned to the manual position, the torque or helping action will increase to the maximum adjusted value, as set by the manual rheostat. Transfer from automatic to manual torque control can be made while running or at rest.

Normal stopping with regenerative braking to slow speed, followed by dynamic braking, will be obtained from the stop push button with the emergency stop push button furnishing full dynamic braking on both drum motors.

Rewinder speed indicator will be provided to furnish indication of machine speed, and individual winding drum ammeters will be provided to indicate the total load on each winding drum motor.

The 5 HP DC motor will speed-track the No. 1 winding drum motor and be powered from its generator.

A control transformer is furnished with the drive to provide 110-1-60 current to all AC controls on both the Langston machinery and the drive.

The drive supplier will furnish start-up assistance and make any necessary adjustments to the drive from a local field service office as part of the drive price. Data books will be furnished covering the drive equipment.

Equipment - Extra

At the additional cost specified, a built-in method of testing individual regulator components, while at rest or operating, can be provided. The testing device will be built into the control cabinet and a panel tester will contain a meter, selector switch and test chart.

Item #3: Floor mounted desk type control console to house controls and indicators for the Winder, Winder Drive, Unwind Stand, and Roll Drop.

Item #4: The Hydraulic Shaftless Unwind Stand will accommodate one mill roll at the rated diameter and the rated maximum weight at the maximum Winder speed specified. The mill roll will range in width from the maximum or rated machine width plus 3" trim allowance down to 18" width.

Heavy cast iron side frames, permanently mounted on the floor, carry a cylindrical cross member on which is mounted a pair of arms. These arms may be opened or closed, moved laterally in unison, and raised or lowered, all in response to push button control. The arms will lift a 26" minimum diameter roll off the floor. The above operations are all accomplished hydraulically.

Item #4 - Continued:

One idler will be mounted on the upper front segment of the side frames of the Stand for threading.

A hydraulic power source, including hydraulic pump, AC motor with across-the-line starter, and oil reservoir (serving as a base) is supplied by the S. M. Langston Company.

The air-operated brakes will consist of an entire assembly of two brake drums, one mounted on each arm, and a pneumatic control for manually setting tension.

Equipment - Extra

A double idler arrangement will be furnished complete with special brackets for mounting on the front of the Unwind Stand. This double idler arrangement will work in conjunction with the constant tension control and the side register control.

For a constant tension braking arrangement, as an integral part of the shaftless Unwind Stand, a second idler, actually a "dancer" idler, will be furnished with a load cell arrangement. Over this idler passes the paper web in tension with the angle of wrap maintained by the two-idler arrangement. The force of the paper on this "tension" idler is proportional to the tension reading of the paper web which furnishes the initial signal to the load cell as primary control of the pressure into the pneumatic water-cooled brakes on the Unwind Stand.

Tension is maintained automatically during the unwind or, if the operator prefers, it may be controlled manually. By means of a pressure gauge reading the tension is preset by the operator before the unwind operation begins.

A side register control system can be furnished which utilizes a hydraulic piston mounted at the base of the Stand to move the entire Stand which will be mounted on special roller bearings. By moving the entire Stand, both the mill roll and the threading idler will move in unison.

The pneumatic scanner head will be positioned over the paper web to track the edge of the sheet. It will be in the vicinity of the threading idler.

The hydraulic lateral adjustment can be augmented by an oscillating control to give a lateral movement at an adjustable frequency and amplitude, preset before the operation and controlled automatically. When this feature is added to a Stand with Side Register Control, several side register elements are utilized in the oscillating control.

The oscillating control feature, providing a lateral movement at an adjustable frequency and amplitude, can be furnished without side register control, if so desired.

Item #5 - Alternate "A": The Langston Hydraulic Roll Lowering Device consists basically of a shaft mounted on pedestals and running laterally in front of the Winder beam. On the shaft are mounted a series of arms supporting a steel table. The table is actuated by a hydraulic cylinder, push button controlled. This device is mounted on the floor, separate from the Winder.

Item #5 - Alternate "B": This Roll Drop, built by the Revolvator Company, in North Bergen, New Jersey, consists of a platform, fully skirted, and is able to accommodate the rewound roll off the Slitter and Winder.

This Roll Drop uses a single hydraulic piston to lift the platform. It has electrically operated extension arms bridging the space between the platform and the Winder. These arms are equipped with interlocks to prevent the Winder's Roll Ejector from operating until the arms are fully extended and against the Winder. Mechanically actuated roll stops are automatically raised so that the roll does not leave the platform until floor level is reached.

The hydraulic power for the Roll Drop will be furnished by a separate hydraulic pump unit including AC motor and across-the-line starter furnished as part of the Roll Drop.

* * *

GENERAL SPECIFICATIONS

PAINT: All exposed machine finished surfaces not painted will be coated with a temporary rust preventative before shipment. All other surfaces will be suitably cleaned, primed and finish painted with grey machinery enamel, unless otherwise specified.

STEAM: Steam pressure vessels, if incorporated in any of the machinery covered by this proposal, shall be constructed and manufactured in accordance with the A.S.M.E. Unfired Pressure Vessel Code U-69. If local codes require mandatory departure therefrom, it shall be the customer's responsibility to bring any specific requirements to Langston's attention. Deviations from standard design, fabrication, testing, or inspection procedures will be at customer's expense.

COMPRESSED AIR: Machines incorporating pneumatically operated components require compressed air supply delivered to the machine at 100 pounds per square inch gauge.

WATER: Customer is to provide an adequate water supply delivered to the machine for water-cooled components, where specified.

DESIGN: In fulfilling this Contract, Langston reserves the right to make, without notice, minor modifications in design and construction of the machinery herein specified, and to incorporate engineering improvements not exceeding the Contract price, to insure the customer receiving the most modern and efficient equipment available at the time of production.

ELECTRICAL: Electrical apparatus included herein conforms to Langston's conception of the standard industrial concepts of the National Electric Code, NEMA, and regularly accepted industrial practice as exercised by leading electrical manufacturers. In case local codes interpret otherwise and require other arrangements or additional equipment, Langston cannot assume responsibility to furnish equipment in conformance to local codes unless the specific requirements are stated as a definite part of the order.

NOTE: The Electrical Apparatus included herein is based on ⁵⁵⁰~~440~~ volt, 3 phase, 60 cycle power supply. AC control circuits will be 110 volt, single phase.

If different electrical characteristics are specified, prices will vary accordingly.

Electrical Characteristics

_____ volt, _____ phase, _____ cycle

(To be specified by Customer)

April 4, 1963

PERFORMANCE: If for a period of sixty (60) days after this machinery is put in operation, customer does not notify Langston in writing of any claim that machinery has not fulfilled terms of contract, it is agreed that the machinery has met all requirements of the contract.

WARRANTY: Langston warrants this machinery to be free from defects in materials and workmanship and will replace freight prepaid any parts proving defective provided claim for such defects is made in writing within one (1) year from date of original installation. Langston's responsibility hereunder is specifically limited to replacement of defective material and shall in no manner include liability for any damage to persons or other property nor any consequential damages.

ERECTION: It is agreed Langston is to furnish, and customer is to pay, an Erector capable of installing this machine, with labor and material to be supplied by customer, and of giving instructions in its operation. Customer is to prepare foundation to receive machinery; have motors placed and wired; connect power to machines; complete pipe connections to headers and outlets to machines where required.

The current charge for Langston Erector service is \$7.50 per hour, subject to adjustment to rate prevailing at time of installation. Saturdays and time in excess of eight (8) hours per day will be charged for at time and one half; and Sundays and Holidays at double time. When Erector does not work Saturdays, Sundays and Holidays, charges will be based on eight (8) hours straight time. Charges for travel time will not exceed eight (8) hours per day at straight time. Transportation will be billed at cost. All living expenses will be billed at a rate of \$20.00 per diem.

* * *

All agreements contingent upon strikes, accidents, and other delays unavoidable or beyond our control. Prices are subject to an increase equal in amount to any Federal, State or Local Sales (or similar) Taxes specifically imposed subsequent to the date of this contract.

This contract is not binding until accepted by an officer of the Samuel M. Langston Company at the home office, Camden, New Jersey, and if accepted, this shall be considered as a sale made and to be concluded at Camden, New Jersey, and a contract made and to be executed entirely within the State of New Jersey.

Respectfully submitted,

ACCEPTED:
INTERNATIONAL PAPER COMPANY

W. H. Kennedy, Sales Assistant
ACCEPTED:
SAMUEL M. LANGSTON COMPANY

DATE:

DATE:

Model #304 Slitter Winder
and #345 Stand

International Paper Co.
Livermore, Falls, Maine

S. O. #9886 & 9887

Floor Plan U-303995

Hydraulics: Winder 960324-15
Stand 960376-4

Air Circuit 960345-15

Piping: Hydraulics 302521-9
Air, Water 302522-9

Control Console 303996

Electrical 960570



INTERNATIONAL PAPER COMPANY

220 EAST 42nd ST. NEW YORK 17, NEW YORK
212 MURRAY HILL 2-7500

THIS NUMBER MUST APPEAR ON ALL INVOICES.
PAID TO THE ORDER OF THE INTERNATIONAL PAPER COMPANY
NEW YORK, N. Y.

PURCHASE ORDER NO.

NY 41459

REV. NO.

2044

MAIL INVOICES IN DUPLICATE TO: AUDITOR
INTERNATIONAL PAPER CO., 220 E. 42ND ST.,
N. Y. C. UNLESS OTHERWISE SPECIFIED.

SHIP TO US AT ADDRESS GIVEN BELOW

TO

Samuel M. Langston Company
Camden 4
New Jersey

International Paper Company
Livermore Falls
Maine

PLEASE FURNISH US WITH THE FOLLOWING SUBJECT TO OUR TERMS AND CONDITIONS

DELIVER BY	VIA	F.O.B.	TERMS	DATE
December 1, 1963	Freight	Shipping Point	See below *	April 25, 1963

DESCRIPTION

Please furnish the following equipment per your quote dated April 4, 1963, except Lat Type
Midland Shaft in lieu of Collapsible Shaft and Engineering Charges as indicated:

One (1)	92" Speedmaster Model 483 Slitter - Rewinder, 4500 FPM Max. Rewind Speed, 40" Rewind Dia., 1" Min. Slit Width	\$ 46,900.00
	Engineering Charge for Langston Torque Control Drive	1,920.00
One (1)	Pd. Steel Rewind Shaft for 3" ID Paper Cores	545.00
One (1)	Pd. Midland Lat Type Pneumatic Collapsible Shaft	1,055.00
One (1)	Control Console Housing Controls	925.00
One (1)	92" Model #345 Hydraulic Shaftless Unwind Stand	17,150.00
Two (2)	Idler Arrangement	2,005.00
	Constant Tension Control	1,900.00
	Langston Side Register Control	3,090.00
	Automatic Oscillation Control	600.00
	Roll Lowering Device & Hand of Winder to be determined.	

* 10% upon receipt of Shipping Papers - 30% - 30 days after machine is
set up and ready to run.

CONFIRMED ORDER - DO NOT DUPLICATE

ARC/c

RECEIVING DEPT. COPY

DIVISION PURCHASING AGENT



INTERNATIONAL PAPER COMPANY

220 EAST 42nd ST. NEW YORK 17, NEW YORK
212 MURRAY HILL 2-7500

THIS NUMBER MUST APPEAR ON ALL INVOICES.
PAID TO THE ORDER OF THE INTERNATIONAL PAPER COMPANY
NEW YORK, N. Y.

PURCHASE ORDER NO.

NY 42725

2044

MAIL INVOICES IN DUPLICATE TO: AUDITOR
INTERNATIONAL PAPER CO., 220 E. 42ND ST.,
N. Y. C. UNLESS OTHERWISE SPECIFIED.

SHIP TO US AT ADDRESS GIVEN BELOW

TO

General Electric Company
570 Lexington Avenue
New York City, New York

International Paper Company
Otis Hill
Livermore Falls, Maine

Attn: Mr. Ray Griggs

PLEASE FURNISH US WITH THE FOLLOWING SUBJECT TO OUR TERMS AND CONDITIONS

DELIVER BY	VIA	F.O.B.	TERMS	DATE
		Shipping Point Freight Allowed	Net 30 Days	5/14/63

Torque control system drive

1 (One) S. M. Langston for 92" Speedmaster Slitter and Winder Drive consisting
of the following:

1. G. E. Variable Speed D. C. Drive
2. 100 H. P. gearmotor, direct connected to the first winding drum.
3. 30 H. P. Torque control, gearmotor direct connected to the second winding drum.
4. 5 H. P., 1750 RPM, D. C. Motor to be belted to the Unwind stand idler roll.
5. Power and control unit housing the regulators, drive adjustments, and the motor generator set with magnetic across the line starter in an enclosed cabinet, air cooled by filter air.
6. Built in panel tester for control cabinet providing method to test individual regulator components while at rest or operating.

Price \$20,037

NOTE: Complete drawings and specifications to be sent to the Langston Corporation
in Camden, New Jersey. All motors on this equipment to be sent to Langston
and marked for International Paper.

RECEIVING DEPT. COPY

DIVISION PURCHASING AGENT